

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) An oscillator circuit for use in a local oscillator of an RF communications device that communicates over an RF channel, said oscillator circuit comprising an oscillator transistor coupled to a power supply voltage (V_{cc}) through a buffer transistor and a biasing network having bias voltage outputs coupled to a control input of said oscillator transistor and to a control input of said buffer transistor, said bias voltage network being coupled to V_{cc} , and further comprising circuitry for setting a magnitude of V_{cc} as a function of at least one of RF channel conditions or an operational mode of the RF communications device, wherein the value of V_{cc} is set so as to minimize power consumption as a function of an amount of allowable local oscillator phase noise, and where V_{cc} is coupled to said oscillator transistor directly or via a buffer transistor.
2. (Original) An oscillator circuit as in claim 1, wherein said RF channel conditions are determined by calculating a signal-to-noise ratio (SNR).
3. (Original) An oscillator circuit as in claim 1, wherein the magnitude of V_{cc} is set between about zero volts and some maximum value.
4. (Original) An oscillator circuit as in claim 1, wherein said operational mode is one of a TDMA mode or a CDMA mode.
5. (Original) An oscillator circuit as in claim 1, wherein said operational mode is one of a burst transmission and reception mode or a substantially continuous transmission and reception mode.
6. (Original) An oscillator circuit as in claim 1, wherein said operational mode is one of a narrow

bandwidth mode or a wider bandwidth mode.

7. Cancelled

8. (Currently Amended) An oscillator circuit for use in a local oscillator of an RF communications device that communicates over an RF channel, said oscillator circuit comprising an oscillator transistor coupled to a power supply voltage (V_{cc}) through a buffer transistor and a bias voltage network having bias voltage outputs coupled to a control input of said oscillator transistor and to a control input of said buffer transistor, said bias voltage network being coupled to another power supply voltage V_{bias} , and further comprising circuitry for setting a magnitude of both V_{cc} and V_{bias} as a function of at least one of RF channel conditions or an operational mode of the RF communications device, wherein the values of V_{cc} and V_{bias} are set so as to minimize power consumption as a function of an amount of allowable local oscillator phase noise.

9. (Original) An oscillator circuit as in claim 8, wherein said RF channel conditions are determined by calculating a signal-to-noise ratio (SNR).

10. (Original) An oscillator circuit as in claim 8, wherein the magnitude of V_{cc} and V_{bias} is set between about zero volts and some maximum value.

11. (Original) An oscillator circuit as in claim 8, wherein said operational mode is one of a TDMA mode or a CDMA mode.

12. (Original) An oscillator circuit as in claim 8, wherein said operational mode is one of a burst transmission and reception mode or a substantially continuous transmission and reception mode.

13. (Original) An oscillator circuit as in claim 8, wherein said operational mode is one of a narrow bandwidth mode or a wider bandwidth mode.

14. Cancelled

15. (Original) A broad bandwidth/narrow bandwidth dual mode RF transceiver, comprising:

at least one phase locked loop (PLL) that includes a voltage controlled oscillator (VCO) providing a local oscillator signal for at least one of an I/Q modulator or an I/Q demodulator;

a processor responsive to an output of said I/Q demodulator for determining at least one aspect of RF channel quality; and

circuitry coupled between said processor and said VCO for minimizing at least VCO power consumption as a function of an amount of allowable VCO phase noise for a current RF channel quality.

16. (Original) A dual mode RF transceiver as in claim 15, wherein at least said VCO can be turned off between bursts when operating in said narrow bandwidth mode.

17. (Original) A dual mode RF transceiver as in claim 15, wherein a magnitude of one or both of a VCO supply voltage V_{cc} and a VCO biasing supply voltage V_{bias} are variable by said circuitry for varying the power consumption of said VCO.

18. (Original) A dual mode RF transceiver as in claim 17, wherein the magnitude of V_{cc} and V_{bias} is variable between about zero volts and some maximum value.

19. (Original) A dual mode RF transceiver as in claim 15, wherein said RF channel quality is determined by calculating a signal-to-noise ratio (SNR).

20. (Original) A method for operating a broad bandwidth/narrow bandwidth dual mode RF transceiver, comprising:

operating at least one phase locked loop (PLL) that includes a voltage controlled oscillator (VCO) to provide a local oscillator signal for at least one of an I/Q modulator or an I/Q demodulator;

responsive to an output of said I/Q demodulator, determining at least one aspect of RF channel quality; and

minimizing at least the power consumption of said VCO as a function of an amount of allowable VCO phase noise for a current RF channel quality.

21. (Original) A method as in claim 20, and further comprising turning off at least said VCO between bursts when operating in said narrow bandwidth mode.